

Appl. No.: 09/448,175

Amdt. dated: 4/12/2004

Reply to Office Action of November 10, 2003

### **REMARKS/ARGUMENTS**

Upon entry of the instant amendment claims 1-5 and 7-9 are pending. Claim 6 has previously been withdrawn from consideration. Claims 1, 4 and 8 have been amended to more particularly point out the applicant's invention. It is respectfully submitted that the application is in condition for allowance.

### **Information And Disclosure Statement**

Paragraph 1 of the Detailed Action indicates that non-patent references were not included with the Information Disclosure Statement. The applicant is respectfully enclosing a copy of the return post card receipt which indicates that the Information Disclosure Statement including the references were received by the U.S. Patent Office. Notwithstanding, the applicant is respectfully resubmitting copies of the non-patent references that were submitted previously.

The Examiner has respectfully requested to make those references of record.

### **Claim Rejections – 35 U.S.C. § 112**

Claims 1-3, 8 and 9 have been rejected on 35 U.S.C. § 112, first paragraph for allegedly failing to comply with the written description requirement. The basis for this rejection is that Claims 1 and 8 recited a frequency analyzer providing a single output  $x_r$ . Claim 1 recites a frequency analyzer. Claim 1 has been amended to delete the language relating to the synthesizing of the input signals. Thus, the rejection to Claims 1 as well as dependent Claims 2 and 3 therefrom should be obviated.

Claims 8 recites a frequency synthesizer illustrated in FIG. 1B and discussed, for example, on line 27. Accordingly, it is respectfully submitted that the specification clearly supports the frequency synthesizer claimed in Claims 8 and 9. The Examiner is thus requested to reconsider and withdraw this rejection.

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**Claims Rejection – 35 U.S.C. § 102.**

Claims 1 and 8 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Cariolaro at European Patent Number EP 0 668 679 A2. In order for there to be anticipation, each and every one of the elements of the claims must be found in a single reference. It is respectfully submitted that the claims at issue, 1 and 8, recite subject matter clearly not disclosed or suggested by the Cariolaro reference. For example, the Claims 1 and 8 now recite that the output modulators include a multiplier for multiplying the output of the polyphase filters by a factor so that the coefficients of the polyphase filters are real. It is respectfully submitted that the Cariolaro reference does not disclose or suggest such an element. Thus, there can be no anticipation. Accordingly, the Examiners respectfully request to reconsider and withdraw the rejection.

**Claim Rejections – 35 U.S.C. § 103**

Claims 2-5 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over the Cariolaro reference. As discussed above, it is respectfully submitted that the Cariolaro et al. reference does not disclose a modulator or multiplier selected so that the outputs of the polyphase filters are real. As discussed in pages 4 and 5 of the application, careful selection of the modulators results in hardware for the system. For example, as discussed in the specification, for a 8-phase, 203-tap filter, only 8 selectable negators are required as opposed to 211 for known DFT filter banks. Accordingly, it is respectfully requested that the Examiner reconsider and withdraw the rejection.

Claims 7 and 9 were rejected under 35 U.S.C. § 103(a) as being unpatentable under Cariolaro et al. in view of Petranovich et al. U.S. Patent No. 5,937,010. The Cariolaro et al. patent has been discussed above. The Petranovich et al. U.S. Patent No. similarly does not disclose a system for maintaining the coefficients of the polyphase filter taps as real.

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Accordingly, it is respectfully submitted that the claims, as amended, define patentable subject matter over the references of record.

Respectfully submitted,

KATTEN MUCHIN ZAVIS ROSENMAN

By:

  
John S. Paniaguas  
Registration No. 31,051  
Attorney for Applicant(s)

Katten Muchin Zavis Rosenman  
525 W. Monroe Street  
Suite 1600  
Chicago, Illinois 60661-3693  
(312) 902-5312  
(312) 577-4532  
Customer No.: 27160